DULTMEIER Sales

5 HP Pump Stations featuring CAT PUMPS®

DU PS1501C-PG / DU PS1501CPG2
DU PS1503C-PG / DU PS1503CPG2

Owner's Manual #0781 071811	
Serial Number:	**Installation Date:**

IMPORTANT

Please read and understand this manual. Store in safe location for future reference.

Everyone who operates this unit should understand basic operations and safety precautions! The time you take to fully understand the proper installation, maintenance and use of the machine will prolong its service life, and assure you of trouble free operation.

When unpacking, check to make sure all the parts shown on the Parts Breakdown near the end of this manual are included. If any parts are missing or broken, please call Dultmeier Sales as soon as possible.

Consumers should notice that this manual may differ slightly from the actual product as more improvements are made to our products. Some of the pictures in this manual may differ slightly from the actual product as well. Dultmeier Sales reserves the right to update designs and / or change the specifications at any time without incurring any obligation to install them on units previously sold.

If you have any questions or suggestions about this manual, please contact us.

Table of Contents

Safety Information 1
Specifications 2-3
Installation & Operating Instructions 4-6
Parts Breakdown 7
Warranty Information 8
Checklist 9

Dultmeier Sales, LLC
1.800.228.9666 · Fax: 1.402.333.5546 · 13808 Industrial Road **Omaha, NE** 68137
1.800.553.6975 · Fax: 1.319.386.5448 · 601 West 76th Street **Davenport, IA** 52806
http://www.dultmeier.com · dultmeier@dultmeier.com

To avoid serious or fatal personal injury or major property damage, read and follow all safety and operation instructions in the manual.

This is a **Safety Alert Symbol** -
When you see this symbol in the manual, look for the following signal words & be alert to the potential for personal injury or property damage.

DANGER Warns of potential hazards that **WILL** cause serious personal injury, death or property damage.

WARNING Warns of potential hazards that **CAN** cause serious personal injury, death or property damage.

CAUTION Warns of potential hazards that **WILL** or **CAN** cause minor personal injury, death or property damage.

IMPORTANT Indicates special instructions that **MUST** be followed but not related to hazards.

This manual is intended to assist in the installation and operation of this unit. Do not attempt to operate this unit without reading and understanding this manual.

General Safety

To avoid the risk of serious bodily injury and property damage, read safety instructions carefully before installing this system. Follow all local and/or national plumbing and electrical codes when installing.

IMPORTANT

Do Not Allow System or Components to Freeze.
To do so may damage the system and will void the warranty.

WARNING

Never Run the System Dry.
Running the unit dry (without fluid) can damage internal parts, overheat pump (which can cause burns to people handling or servicing the pump), and will void the warranty.

WARNING

Hazardous voltage can shock, burn or cause death.

Risk of Electric Shock.
Keep the unit dry at all times -
Do not wash the motor or electrical panel or allow the unit to sit in standing water.

Use only Ground Fault Circuit Interrupter (GFCI) protected grounded outlet for the cord plug. If you must use an extension cord, use only UL approved indoor/outdoor, 3-wire, grounding type cords. The cord must be rated to support amp draw. Do not allow any part of cord or receptacle ends to sit in water.

To avoid fatal shocks, proceed as follows if service is needed:

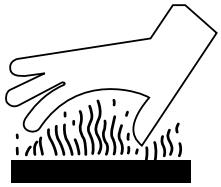
A. Turn off water to the system.
B. Disconnect the power at main electrical service before unplugging the unit.
C. Ground the electrical outlet box.
D. Take extreme care when changing fuses.

IMPORTANT

Check for Proper Rotation

Pump was designed for forward rotation to allow optimum lubrication of the crosshead area. Reverse rotation is acceptable if the crankcase oil level is increased slightly above center dot to assure adequate lubrication.

CAUTION



Burn Hazard Do Not Touch An Operating Motor

Modern motors can operate at high temperatures. To avoid burns when servicing pump, allow it to cool for 20 minutes after shutdown before handling.

Single & Double Wash Pump Station Specifications

Model(s)	**DU PS1501C-PG** (Single Pump Station)
	DU PS1501CPG2 (Double Pump Station)
Style	Bench Style Pump Station
Capacity	3.8 GPM
PSI	1800
Maximum Inlet Pressure	60 PSI
Maximum Inlet Temperature	130˚ F
	*See Included CAT PUMPS® Service Manual for Higher Temperatures
Motor	CE 131538 :: 5 HP / 1 PH, 230 Volts / 23 Amps
Pump	CC 310S
Crankcase Capacity	18 oz.
Pump Drive	Belt
Pump Inlet	1/2”
Pump Discharge	3/8”
Dimensions	Approx. 22”W x 29”L x 62”H (DU PS1501C-PG)
	Approx. 44”W x 29”L x 62”H (DU PS1501CPG2)
Shipping Weight	Varies by Model, Approx. 400-800 lbs.

System Features & Options

CAT PUMPS® Plunger Pump

5 HP, 1 PH, TEFC Motor

Stainless Steel Float Tank

Dual Inlet Water Supply Solenoid

Regulating Balanced Relief Valve

Pressure Gauge

Safety Pop Off Valve

Pulsation Dampner

Soap & Wax Solenoids

Inlet Check & Gate Valves

Inlet Strainer

Electrical Panel with Motor Starter, Transformer, Low Voltage Fuse, Hour Meter, & Terminal Strip

All Units are Pre-Plumbed, Pre-Wired, and Tested prior to shipment

Single & Double Wash Pump Station Specifications

Model(s)	**DU PS1503C-PG** (Single Pump Station)
	DU PS1503CPG2 (Double Pump Station)
Style	Bench Style Pump Station
Capacity	3.8 GPM
PSI	1800
Maximum Inlet Pressure	60 PSI
Maximum Inlet Temperature	130˚ F
	*See Included CAT PUMPS® Service Manual for Higher Temperatures

Motor

CE EM3615T	5 HP, 3 PH	
Volts:	208 - 230	460
Amps:	13.9 - 13.4	6.7

Pump	CC 310S
Crankcase Capacity	18 oz.
Pump Drive	Belt
Pump Inlet	1/2”
Pump Discharge	3/8”
Dimensions	Approx. 22”W x 29”L x 62”H (DU PS1503C-PG)
	Approx. 44”W x 29”L x 62”H (DU PS1503CPG2)
Shipping Weight	Varies by Model, Approx. 400-800 lbs.

System Features & Options

CAT PUMPS® Plunger Pump

5 HP, 3 PH, TEFC Motor

Stainless Steel Float Tank

Dual Inlet Water Supply Solenoid

Regulating Balanced Relief Valve

Pressure Gauge

Safety Pop Off Valve

Pulsation Dampner

Soap & Wax Solenoids

Inlet Check & Gate Valves

Inlet Strainer

Electrical Panel with Motor Starter, Transformer, Low Voltage Fuse, Hour Meter, & Terminal Strip

All Units are Pre-Plumbed, Pre-Wired, and Tested prior to shipment

Placement

1. Place Pump Station on level floor near water source, electrical supply, and floor drain. Surface must be as level as possible.

2. Use rubber mounting feet to level station. **(Fig. 1)**

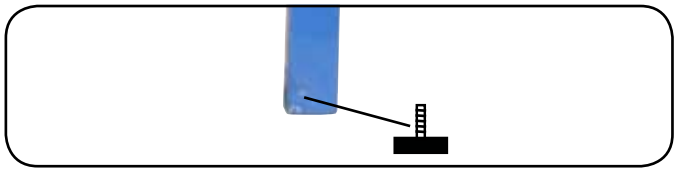


figure 1

Electrical

1. Electrician to run power from Main Electrical Panel to the Disconnect in the control panel. **(Fig. 2)**

IMPORTANT **For branch service protection & to size wire see decal on control panel door.**

2. Electrician to run control cable* from control panel to the selector switch or coin box.

3. Terminate control cable to terminal blocks in control panel. Match all color schemes. Use ground bar for all 24V common **(Fig. 2)**

IMPORTANT **For terminal block identification see decal on control panel door.**

4. Use molex connectors & fittings (provided) on selector switch or coin meter box. This will allow you to simply unplug the units from the wall if service is required. **(Fig. 3)**

IMPORTANT **It is recommended you use a molex crimp tool. This will give a tight even crimp around the molex pin.**

To Order Use Part Numbers:

RV T-18	Delux Crimper
UT GCE12464	Crimper
UT MOL11030006	Extra Tool

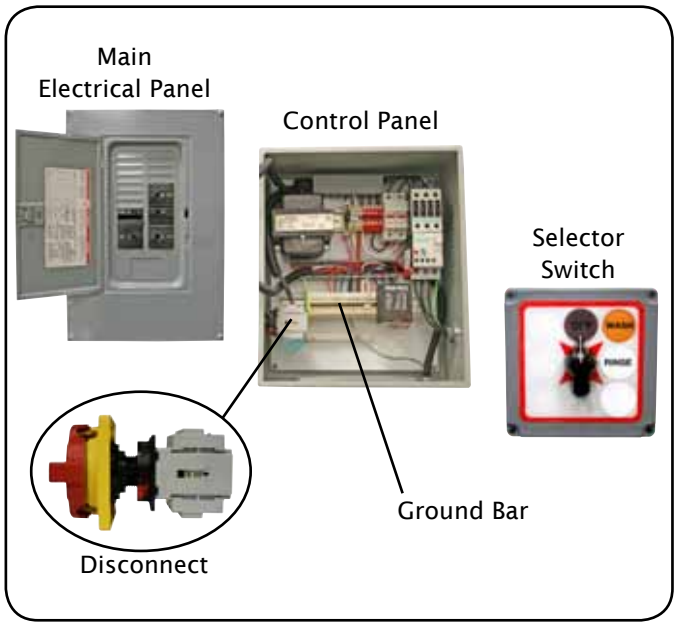


figure 2

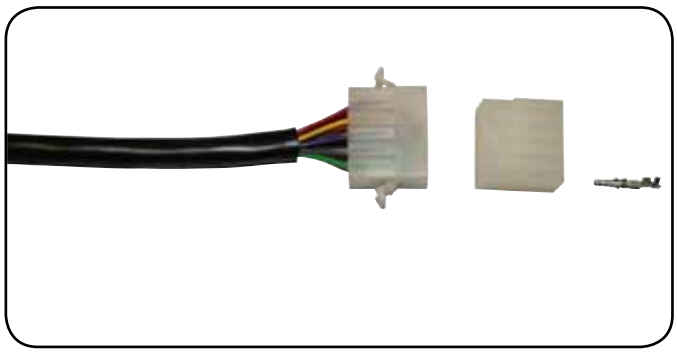


figure 3

Plumbing

1. Plumber to run soft water city pressure line to cold water side of dual solenoid (front MGHF) fitting on inlet of water supply tank. **(Fig. 4)** Run soft hot water line from boiler or heater to hot water side of dual solenoid (back MGHF).

IMPORTANT **Water supply pressure should not exceed 60 PSI. Plumber to supply pressure regulator if required.**

2. Run hard water weep line from normally open weep solenoid to weep inlet on Pump Station.

3. Measure hose run lines from Pump Station to bay booms and assemble hoses with reuseable fittings. Connect high pressure run hose to boom inlet. **(Fig. 5)** Connect other end of run hose to swivel union on discharge of pump.

IMPORTANT **Make sure hose is protected from wearing against any rough surface due to vibration.**

4. Install boom and trigger gun package in bay.

5. Install manifolds for any secondary systems as required.

Hot Water Connection: FGHF on the left.

Cold Water Connection: FGHF on the right.

figure 4

Bay Run Hose Union

Connect bay run hose at boom first. Connect other end to this union on discharge of pump.

figure 5

Chemical Setup

1. Set or mount Soap tank in place near Pump Station and run city pressure soft water line to inlet of tank. Select proper mix tip for soap and screw into chemical inlet port on Hydrominder eductor. **(Fig. 6)**

Consult Hydrominder instructions and chemical product label for further dilution information.

2. Attach chemical pickup tubing to chemical inlet port on eductor and place other end with foot valve strainer and weight into bulk soap container.

3. Repeat these steps for wax.

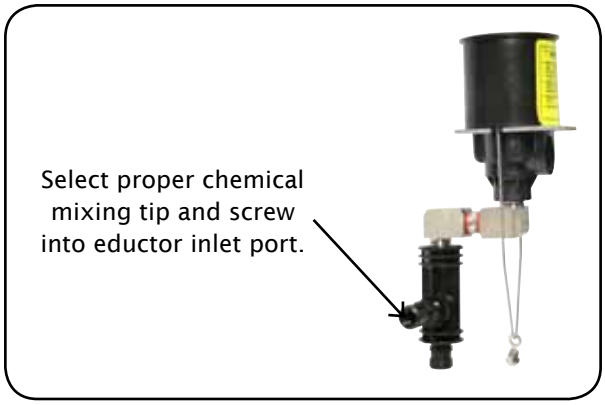


figure 6

Testing & Operation

1. Remove nozzle from gun assembly in bay. Place rotary switch in bay on rinse position. Place rinse changeover switch on Pump Station Electrical Panel on cold water position. Activate system and run for one minute to purge any foreign materials and air from the line.

⚠ WARNING **Hazardous Pressure. Do not discharge toward body.**

2. Replace nozzle and restart system. Pressure is set at factory. Open and close trigger gun slowly to ensure that pressure is balanced properly. Make adjustments at handle on balanced relief valve if needed. **(Fig. 7)**

⚠ IMPORTANT **Pressure should be set with trigger open. With trigger closed pressure will spike approx. 100 PSI.**

3. Place rinse changeover switch to hot water position and make sure water heater or boiler is working.

4. Place bay switch on soap position. Pump suction for soap and wax is set at factory with inlet line gate valve. Inlet flow to pump is restricted with gate valve to create .5 inches of vacuum at the pump. There should be no need to change this setting. **(Fig. 8)**

⚠ CAUTION **Do not let the pump run for a long amount of time without the proper flow.**

5. Adjust metering screw on soap solenoid until desired strength of soap appears in bay. **(Fig. 9)** With screw fully open chemical draw is 25 oz. per minute. You may have to experiment with concentration in soap pre-mix tank.

6. Repeat these steps for wax.

7. Test secondary systems as necessary. Consult instruction manual supplied with each system.

Balanced Relief Valve

Turn Handle:
Clockwise to increase pressure &
Counter-Clockwise to decrease pressure

figure 7

Gate Valve

Turn handle Clockwise until pump starts to chatter due to flow loss. Turn Counter-Clockwise to point where pump chattering smooths out.

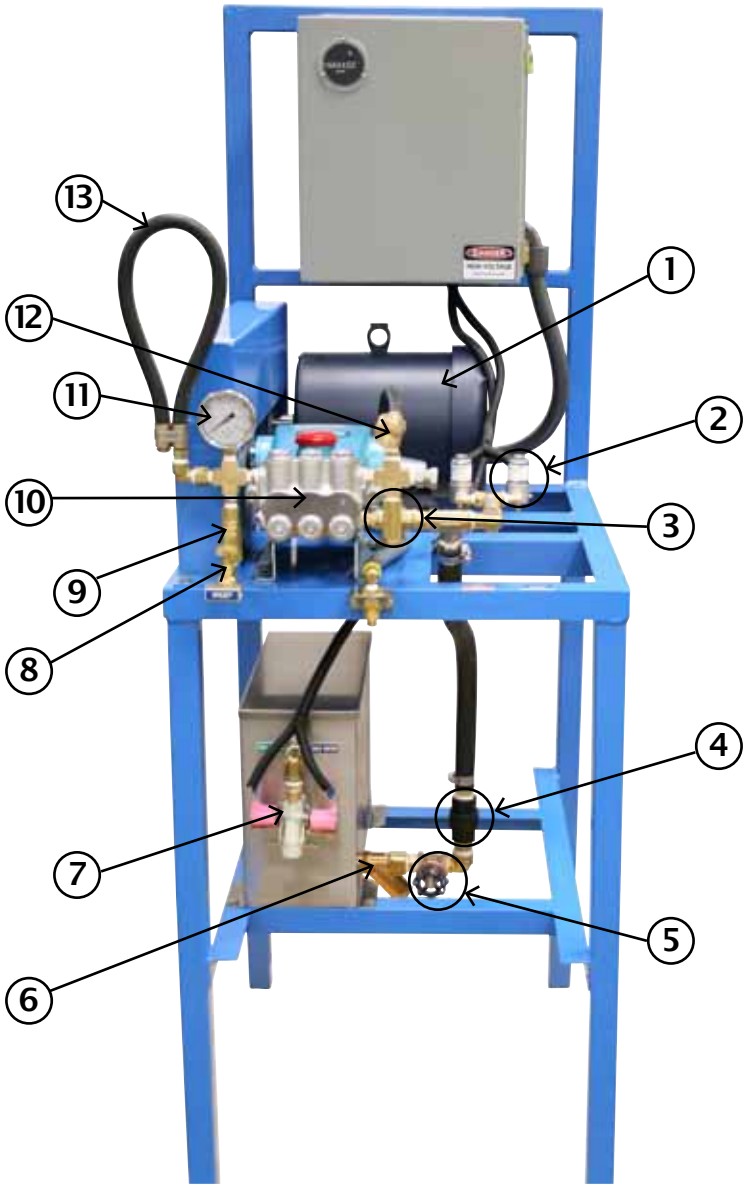
figure 8

Soap & Wax Solenoids

Metering Screw. Turn Clockwise for decrease in flow and Counter-Clockwise for increase in flow.

figure 9

Parts Breakdown: DU PS1501C-PG & DU PS1503C-PG



Item	Part Number	Description
1	CE 131538	Motor 5 HP, Single Phase
	CE EM3615T	*Motor 5 HP, Three Phase*
2	KI 3X293	Soap & Wax Solenoids with Meter
	PA 3X293	*Replacement Plunger*
3	IP 100534	Safety Pop Off Valve
4	SM 687-12E	Check Valve
5	TW GV-3/4	Gate Valve
6	DE S6B-80	Bronze Strainer, 3/4”
7	DU 33812-24	Dual Inlet Solenoid
	DU 338K	*Dual Inlet Solenoid Repair Kit*
8	GE 3000-4	Weep Globe Valve
9	SM 470-4F4F	Weep Check Valve
10	CC 310S	Stainless Steel CAT PUMPS® Plunger Pump
11	AH 2750-4	Pressure Gauge
12	NP ST230	Balanced Relief Valve
	NP RK230	*Balanced Relief Valve Repair Kit*
13	HY 3375-8	Pulse Hose
	RB R400-1/2	*Float Valve (Not Visible, Located Inside Tank)*
	GA B46	*Drive Belts (Not Visible, Located Inside Belt Guard)*

Notice Regarding Manufacturer's Limited Warranty

Dultmeier Sales Limited Liability Company (hereinafter Dultmeier), notifies you that component part(s) carry a manufacturer's limited warranty provided by the manufacturer of said component part(s). These warranties do not pertain to normal wear of component part(s) that may occur within any specified period. While Dultmeier is not the manufacturer of any of the component part(s), Dultmeier will assist you in processing any and all manufacturer's warranty claim if applicable and available. Any and all manufacturer's claims must be submitted in writing to the manufacturer within the warranty periods provided by the manufacturer.

Defective component part(s) that are to be considered for manufacturer's limited warranty must be returned to the manufacturer by prepaid shipment with the applicable manufacturer's limited warranty period. If the component part(s) are deemed to be defective under the manufacturer's warranty, Dultmeier will assist in obtaining a replacement or repair of the component part(s). Said component part(s) will be returned F.O.B. Omaha, Nebraska. Replacement or repair shall be the exclusive remedy for any breach of warranty. Labor for installation, either with respect to original or replacement part or components, is not covered under the manufacturer's limited warranty.

Neither the manufacturer nor Dultmeier warrants loss of income or consequential damages for injury or commercial loss resulting from any breach of warranty or warranties stated above.

The manufacturer's limited warranty as stated does not apply to component part(s) which have been improperly installed, misused, altered, neglected, abused or not installed, adjusted, maintained, or used in accordance with applicable codes and ordinances and in accordance with the manufacturer's specifications as to such factors.

Notwithstanding Dultmeier's willingness to assist in the processing of the manufacturer's limited warranty, Dultmeier makes no warranty against infringement of the like, makes no warranty of merchantability, makes no warranty of fitness for a particular purpose, and makes no other warranty, express or implied, including implied warranty arising from the course of dealing or usage of trade.

Compliance with all local, state and federal codes regarding the installation and operation of said equipment, parts and components shall be the responsibility of the purchaser. The rights and obligations of the parties shall be governed by the laws of the State of Nebraska.

Production Checklist

- ☐ OK ☐ NA Oil Level
- ☐ OK ☐ NA Clamps Tight
- ☐ OK ☐ NA Bolts Tight & Anti-Seized
- ☐ OK ☐ NA Belts Tight
- ☐ OK ☐ NA Pulleys Aligned & Torqued to Specifications
- ☐ OK ☐ NA Fittings Straight
- ☐ OK ☐ NA Check Valves ☐ Weep ☐ Soap
- ☐ OK ☐ NA Solenoids ☐ Soap ☐ Wax ☐ Hot Water ☐ Cold Water
- ☐ OK ☐ NA Tested
- ☐ OK ☐ NA Winterized
- ☐ OK ☐ NA _____
- ☐ OK ☐ NA _____
- ☐ OK ☐ NA _____
- ☐ OK ☐ NA _____

- ☐ OK ☐ NA Pop-Off Valve Set _____ PSI
- ☐ OK ☐ NA Unloader Valve Locked
- ☐ OK ☐ NA PSI _____
- ☐ OK ☐ NA Pump RPM _____
- ☐ OK ☐ NA Motor Amps _____
- ☐ OK ☐ NA Motor Wired For _____

Accessories

- ☐ OK ☐ NA Electrical Drawing
- ☐ OK ☐ NA UL Inspected & Tagged
- ☐ OK ☐ NA EP1 Selector Switch
- ☐ OK ☐ NA TF 1 Chemical Hose
- ☐ OK ☐ NA Weights & Strainers
- ☐ OK ☐ NA Trigger Gun 1 2
- ☐ OK ☐ NA Leveling Bolts

Additional Parts Shipped in Container

- ☐ OK ☐ NA _____
- ☐ OK ☐ NA _____
- ☐ OK ☐ NA _____

Built By _____ Checked By _____

Customer Checklist

- ☐ OK ☐ NA Oil Level To Manufacturer's Specifications
- ☐ OK ☐ NA Accessories Included
- ☐ OK ☐ NA Shipping Container Was In Good Shape
- ☐ OK ☐ NA Overall Condition

If you have any questions or concerns about condition of this unit, please contact us before operating.

Dultmeier Sales, LLC
Omaha, NE 1.800.228.9666 • **Davenport, IA** 1.800.553.6975
http://www.dultmeier.com • dultmeier@dultmeier.com